EDF Scheduling of Real-Time tasks on multiple cores

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***Abstract*—As computer technologies have evolved in pursuit of better performance, so also has the complexity of software computations greatly increased. For example, real-time schedulers for multi-core platforms are known to be subject to the so-called scheduling anomalies, where increasing the number of CPUs or the CPU frequency sometimes turns a system non-schedulable causing deadline miss. In the context of our research topic, particular focus is given to the challenge of designing efficient and real-time task schedulers for multiple core platforms, which is well known to be more cumbersome than for Uniprocessor based systems.**

This paper presents an overview discussion into the scheduling technique of real-time tasks on multiple cores using EDF (Earliest Deadline First) scheduling. A further look into different algorithms for scheduling tasks based on EDF methodology would be looked at and at the end, a final conclusion would be drawn for the best approach after comparison.

***Index Terms*—Multi-Core Real-time Scheduling, Real-Time Operating Systems, EDF(Earliest Deadline First)**

I. Introduction

II. brief history of the problem

III. BODY

A. SUB-SECTIONS

IV. Conclusion

References

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